

TMC4 (N-20): sc-82382

BACKGROUND

TMC4 (transmembrane channel-like 4) is a 706 amino acid member of the TMC protein family. TMC4 is a multi-pass membrane protein that may regulate or function as an ion channel or transporter. TMC4 is expressed as three isoforms produced by alternative splicing events. The gene that encodes TMC4 maps to human chromosome 19, which consists of around 63 million bases with over 1,400 genes, making up over 2% of human genomic DNA. Chromosome 19 is the genetic home for a number of immunoglobulin superfamily members including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc α receptors. Key genes for eye color and hair color also map to chromosome 19. Peutz-Jeghers syndrome, spinocerebellar ataxia type 6, the stroke disorder CADASIL, hypercholesterolemia and Insulin-dependent diabetes have been linked to chromosome 19.

REFERENCES

- Zimmermann, W., et al. 1988. Chromosomal localization of the carcinoembryonic antigen gene family and differential expression in various tumors. *Cancer Res.* 48: 2550-2554.
- LaPoint, S.F., et al. 2000. Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL). *Adv. Anat. Pathol.* 7: 307-321.
- Buchet-Poyau, K., et al. 2002. Search for the second Peutz-Jeghers syndrome locus: exclusion of the STK13, PRKCG, KLK10, and PSCD2 genes on chromosome 19 and the STK11IP gene on chromosome 2. *Cytogenet. Genome Res.* 97: 171-178.
- Moodie, S.J., et al. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. *Eur. J. Immunogenet.* 29: 287-291.
- Keresztes, G., Mutai, H. and Heller, S. 2003. TMC and EVER genes belong to a larger novel family, the TMC gene family encoding transmembrane proteins. *BMC Genomics* 4: 24.
- Kurima, K., et al. 2003. Characterization of the transmembrane channel-like (TMC) gene family: functional clues from hearing loss and epidermodysplasia verruciformis. *Genomics* 82: 300-308.
- Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
- Parham, P. 2005. Immunogenetics of killer cell immunoglobulin-like receptors. *Mol. Immunol.* 42: 459-462.
- Orth, G. 2006. Genetics of epidermodysplasia verruciformis: Insights into host defense against papillomaviruses. *Semin. Immunol.* 18: 362-374.

CHROMOSOMAL LOCATION

Genetic locus: TMC4 (human) mapping to 19q13.42; Tmc4 (mouse) mapping to 7 A1.

SOURCE

TMC4 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of TMC4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82382 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMC4 (N-20) is recommended for detection of TMC4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TMC4 (N-20) is also recommended for detection of TMC4 in additional species, including equine.

Suitable for use as control antibody for TMC4 siRNA (h): sc-76679, TMC4 siRNA (m): sc-76680, TMC4 shRNA Plasmid (h): sc-76679-SH, TMC4 shRNA Plasmid (m): sc-76680-SH, TMC4 shRNA (h) Lentiviral Particles: sc-76679-V and TMC4 shRNA (m) Lentiviral Particles: sc-76680-V.

Molecular Weight of TMC4: 78 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.